PWS ID: 5282002

2014 Annual Drinking Water Quality Report

The Evansville Water Department is a public utility owned and operated by the City of Evansville. More information can be found at www.evansvillegov.org under Evansville Water & Sewer Utilities.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

What is a Water Quality Report?

To comply with state and federal regulations, The Evansville Filtration Plant issues a report annually describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and the awareness of the need to protect your drinking water sources. If you have any questions about this report or your drinking water, please call 812-428-0568.

What's in this report?

Answers to questions such as:

- Where does my water come from?
- How do we treat the water?
- What is in my drinking water?
- Where can I find additional information?

Where does Evansville's drinking water come from?

The City of Evansville's drinking water comes from the Ohio River. The Evansville filtration plant is located at mile marker 791.5 in the Highland-Pigeon Watershed of the Ohio. All stream and urban runoff located within this watershed drain into the Ohio River. For more detailed information on the Highland-Pigeon Watershed, please visit the US EPA's National Assessment Database at www.epa.gov/waters/305b/index.html.

- The beginning of the Ohio River is Pittsburgh, Pennsylvania where the Monongahela and Allegheny Rivers converge.
- The Ohio River is 981 miles long.
- It borders six states including: Pennsylvania, West Virginia, Ohio, Kentucky, Indiana, and Illinois.
- The Ohio ends in Cairo, Illinois where it flows into the Mississippi River.
- Almost 10 percent of the U.S. population lives within the Ohio River Basin.

How does the Evansville Water Department treat our drinking water?

Raw, untreated water flows into an intake structure located on the Ohio River. As the water enters the intake structure, it passes through screens that remove large debris. The untreated water is then pumped into the plant passing through an in-line gas chromatograph (the INFICON CMS-5000), an instrument capable of detecting spills that range from petroleum based to volatile organics.

Aluminum polymer coagulants are added so that suspended particles within the water bond together until they become large enough to settle out of the water. Caustic is added to control the pH of the water so that it is non-corrosive to plumbing. Fluoride is added to help protect our teeth. If necessary, carbon can be added to the water to remove various organic contaminants in the water and for taste and odor control. Chlorine, a disinfectant, is used to kill pathogens (disease causing organisms).

After the water travels through the settling basins, it enters the dual media filter beds. Ammonia is added to form chloramines, providing adequate residual disinfection throughout the distribution system. The filters remove any remaining suspended solids and the filtered or finished water is then stored temporarily in our clear wells which are underground reservoirs.

The last step is for the water to be pumped out of the clear wells and into the distribution system as needed to meet the demands of the customer. In 2014, the average daily demand was approximately 22.3 (MGD) million gallons of water.

Substances Expected to be in Drinking Water

To insure that tap water is safe to drink, USEPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. US Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the **EPA's Safe Drinking Water Hotline at (800) 426-4791.**

The sources of drinking water, (both tap and bottled water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants,** such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife

- **Pesticides and herbicides,** which may come from a variety of sources such as agriculture, storm water runoff, and residential uses

- **Inorganic contaminants,** such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming

- **Radioactive materials,** which can be naturally occurring or be the result of oil and gas production and mining activities

Information about Lead in Your Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Evansville Water and Sewer Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Water Hardness (Ca, Mg) – Evansville Water's average Total Hardness concentration for 2014 was **140 ppm** (8.2 gr/gal)

Table Definitions

- **AL (Action Level) –** A required process intended to reduce the level of a contaminant
- **MCL (Maximum Contaminant Level) -** The highest level of a contaminant that is allowed in drinking water MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **MCLGs (Maximum Contaminant Level Goal) -** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **MRDL (Maximum Residual Disinfectant Level) & MRDLG (Maximum Residual Disinfectant Level Goal) -** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbial contaminants.
- **BDL** Below Detectable Limit **N/A** Not Applicable
- **NTU (Nephelometric Turbidity Units) -** The standard measurement of turbidity
- **ppb** (parts per billion)
    - 1 microgram in 1 liter Approximately 1 drop in 10,000 gallons
- **ppm** (parts per million)
    - 1 milligram in 1 liter Approximately 1 drop in 10 gallons
- **pCi/L** (picocuries per liter) - Measurement of the natural rate of disintegration
- **TTHMs (Total Trihalomethanes) -** Disinfection by-product of chlorination
- **TT (Treatment Technique) -** A required process intended to reduce the level of a contaminant in water

What is in my drinking water?

Regulated Contaminants							
Substance (unit)	**Year Tested**	**MCL**	**MCLG**	**Average Detected**	**Range (low-high)**	**Violation**	**Source**
Atrazine (ppb)	2014	3	3	0.3	BDL-0.7	No	Herbicide Runoff
Barium (ppm)	2014	2	2	BDL	BDL	No	Erosion of natural deposits, discharge of drilling wastes
Fluoride (ppm)	2014	4	4	0.71	0.05-0.88	No	Chemical addition for improving dental health
Haloacetic Acids (HAAs) (ppb) Running Annual Avg	2014	60	NA	28.8	25.6-29.6	No	By-product of drinking water chlorination
Nitrate (ppm)	2014	10	10	2.9	2.1-3.6	No	Runoff from fertilizer use, septic tanks
TTHM's (ppb) Running Annual Avg	2014	80	NA	44.2	41.6-46.6	No	By-product of drinking water chlorination
Lead (ppb)[1]	2014	AL=15	BDL	1	<1.0-2	No	Corrosion of household plumbing
Copper (ppm)[2]	2014	AL=1.3	NA	0.025	<0.025-0.034	No	Corrosion of household plumbing
Total Coliform Bacteria[3] (presence / Absence)	2014	5% or 6 Positive	NA	0	0-0%	No	Naturally present in the environment[3]
Turbidity (NTU)[4]	2014	TT[5]	NA	0.06	0.03-0.08	No	Soil Runoff

Disinfectant							
Substance (unit)	**Year Tested**	**MRDL**	**MRDLG**	**Amount Detected**	**Range (low-high)**	**Violation**	**Source**
Total Chlorine (ppm)[6]	2014	4	4	2.9	0.5-3.5	No	Residual Disinfection

Total Organic Carbon (TOC)[7]							
Substance (unit)	**Year Tested**	**MRDL**	**MRDLG**	**Amount Detected**	**Range (low-high)**	**Violation**	**Source**
TOC River (ppm)	2014	TT	NA	3.8	2.3-10.0	No	See Below
TOC Plant (ppm)	2014	TT	NA	1.7	1.0-2.8	No	See Below

Unregulated Contaminants[8]							
Substance (unit)	**Year Tested**	**Amount Detected**	Strontium (ppb)	185	Vanadium	BDL	All other unregulated contaminants were below detectable limits
Nickel (ppb)	2014	<5	Molybdenum(ppb)	1.1	Chrome(ppb)	0.4	
Sodium(ppm)	2014	28.4	Chromium VI (ppb)	0.06	Cobalt	BDL	
Sulfate (ppm)	2014	35.7	Chlorate(ppb)	81.0	1,4-Dioxane	0.155	

Table Footnotes

[1] Samples are collected annually and in 54 homes throughout the city every third year (last 2012). No samples were over the action level for Pb.

[2] Samples are collected annually and in 54 homes throughout the city every third year (last 2012). No samples were over the action level for Cu.

[3] A group of relatively harmless bacteria that live in large numbers in the intestines of man and animals. Their presence is an indicator of possible contamination from human or animal waste. On average 123 samples were collected throughout the city each month and tested for the presence or absence of total coliform bacteria. No samples tested positive for the year.

[4] Turbidity is the measure of the cloudiness of the water. It is a good indicator of the effectiveness of our filtration system. Combined effluent turbidity is measured every four hours.

[5] Combined effluent turbidity must be <0.3 NTU in 95% of monthly measurements.

[6] Total chlorine includes chloramines. Chloramines have the same effect as chlorine for typical water uses with the exception that chloramines must be removed from water used in kidney dialysis and fish tanks or aquariums. Please contact your doctor regarding kidney dialysis. You may contact your pet store or the Evansville Filtration Plant regarding fish or other aquatic life.

[7] A composite measurement of organic constituents. It is used to track the overall organic content of the water. This is an important measure for surface waters, such as the Ohio River, because it correlates with the production of disinfection by-products during chlorination.

[8] Analysis of contaminants that the EPA is using for determination of future regulations

We are pleased to report that during the past year the water delivered to your home or business complied with, or was better than, all state and federal drinking water standards. The EPA has established pollutant-specific minimum testing schedules; however, we monitor many contaminants on a daily basis. These include total chlorine, TTHM's, TOC's, nitrate, fluoride, and total coliform bacteria. Atrazine is monitored daily during the spring and summer months. Turbidity is monitored around the clock.

Special Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the **Safe Drinking Water Hotline at (800) 426-4791**.

Additional Resources

- **The USEPA Office of Water (http://www.epa.gov/ebtpages/water.html),** the **USEPA Office of Ground Water and Drinking Water (www.epa.gov/safewater)**, and the **Center for Disease Control and Prevention (www.cdc.gov)** websites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health.

- **The Indiana Department of Environmental Management** also has a website **(www.in.gov/idem)** that provides complete and current information on water issues in our own state.

- **The Ohio River Valley Sanitation Commission (ORSANCO)** (www.orsanco.org), located in Cincinnati, OH, is a wealth of information on the Ohio River and its conditions.

About This Report

This report contains the results of contaminants detected as well as testing parameters. For a complete listing of all monitored contaminants and results, please send a request to thall@ewsu.com or call (812) 428-0568

Need Additional Help?

For 24 hour service (reporting broken water mains/ Boil Advisory information and status) regarding the water system call (812) 421-2130.

Questions or Comments?

If you have any questions or comments regarding Evansville's Water System, you can reach the Drinking Water Quality Manager (Timothy Hall R.E.M.) at (812) 428-0568. You are also welcome to attend any Evansville Water and Sewer Utility Board meetings which are held every two weeks on Tuesday afternoons at 1:30 pm in Room 307 of the Civic Center located at 1 NW Martin Luther King Jr. Blvd, Evansville, IN 47708.